

This listing of claims will replace all prior versions and listings of claims in this application:

## Listing of Claims

1. (Currently amended) An optical system production line, comprising an optical bench supply that provides optical benches; a component supply that provides mounting structures holding optical components; a pick-and-place machine that receives optical benches from the bench supply, picks optical components from the optical component supply, and solder bonds the mounting structures, holding the optical components, to the optical benches; and an optical system aligner that characterizes the positions of the optical components held by the mounting structures, which have been solder bonded to the optical benches by the pick-and-place machine, and mechanically adjusts the relative positions of the optical components by plastically deforming the mounting structures, which have been bonded to the optical benches by the pick-and-place machine.
2. (Cancelled)
3. (Currently amended) An optical system production line as claimed in claim 1, wherein the optical system aligner characterizes the positions of the optical components by activating optical links of optical systems on the benches, detecting optical signals after interaction with at least some of the optical components[[.]] and adjusting adjusts the optical components to optimize transmission of optical signals over the links.
4. (Previously presented) An optical system production line as claimed in claim 1, wherein the optical system aligner energizes active components of optical systems on the benches and adjusts the optical components, which have been

bonded to the optical benches by the pick-and-place machine, to optimize optical signal transmission through the systems from the active optical components.

5. (Previously presented) An optical system production line as claimed in claim 1, wherein the optical system aligner energizes active components of optical systems and adjusts positions of at least one passive optical component, which have been bonded to the optical benches by the pick-and-place machine, in each of the optical systems to optimize optical signal transmission from the active components to the at least one passive component.

6. (Previously presented) An optical system production line as claimed in claim 1, wherein the optical system aligner energizes active components of optical systems and adjusts positions of at least two passive optical components, which have been bonded to the optical benches by the pick-and-place machine, in each of the optical systems to optimize optical signal transmission between the passive components.

7. (Original) An optical system production line as claimed in claim 1, wherein the pick and place machine is a flip-chip bonder.

8. (Currently amended) An optical system production line as claimed in claim 1, wherein the optical system aligner comprises two jaws for engaging ~~a the~~ mounting structure structures, which has been bonded to the optical benches by the pick-and-place machine, supporting the optical component and moving the structure structures relative to the bench.

Claims 9-16. (Cancelled)

17. (Currently amended) An optical system production line, comprising an optical bench supply for providing optical benches; a component supply for providing mounting structures holding optical components;

a pick-and-place machine for receiving optical benches from the bench supply,  
and for picking optical components from the optical component supply,  
and for solder bonding mounting structures of the optical components to  
the optical benches; and  
means for characterizing the positions of the optical components held by the  
mounting structures, which that have been solder bonded to the optical  
benches by the pick-and-place machine, and for mechanically adjusting  
the relative positions of the optical components by plastically deforming  
the mounting structures that have been bonded to the benches by the pick-  
and-place machine.

18. (Cancelled)

19. (Previously presented) An optical system production line as claimed in claim  
17, further comprising the characterizing and adjusting means characterizing the  
positions of the optical components by activating optical links of optical systems  
on the benches, detecting optical signals after interaction with at least some of the  
optical components, and adjusting the optical components, which have been  
bonded to the optical benches by the pick-and-place machine, to optimize  
transmission of optical signals over the links.

20. (Currently amended) An optical system production line as claimed in claim  
17, further comprising the characterizing and adjusting means energizing active  
components of optical systems and adjusting positions of at least one passive  
optical component, which has been bonded to the optical benches via a mounting  
structure by the pick-and-place machine, in each of the optical systems to  
optimize optical signal transmission from the active components to the at least  
one passive component.